

ABSTRACT OF THE DISCLOSURE

A signal intercept and analysis processor for a wideband intercept receiver system including at least one wideband receiver has a signal detector operatively connectable to the wideband receiver and a signal extractor operatively connected to the signal detector and connectable to the wideband receiver for performing signal extraction directly on a wideband signal output of the receiver and for performing the signal extraction only upon detection of a signal by the signal detector. The signal detector includes a generator of a coarsely sampled or decimated time-frequency representation of the wideband signal output. The time-frequency representation is decimated or coarsely sampled in time compared to an inverse frequency filter bandwidth used in the time-frequency representation. The generator preferably includes a digital filter bank. The digital filter bank in turn may include means for performing a sequence of windowed FFTs on samples of the wideband signal output, wherein a stride between consecutive one of the FFTs is considerably larger than a length of each of the FFTs.